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COLMAN'S RURAL WORLD.

NORMAN J. COLMAN, EDITOR.
LEVI CHURCHUCK, ASSISTANT.

Published every Wednesday, in Chemist building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmers D. Cityman, 330 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemist Building, St. Louis, Mo.

Subscribers must bear in mind that the subscription price of the RURAL WORLD is one dollar a year, and that we do not receive single subscriptions for a less sum, but in our constant effort to enlarge our circulation, we do allow old subscribers to take actually NEW subscribers at the fifty-cent rate, adding a new name with their own for one dollar, and other new names at fifty cents each, but in no case do we accept two OLD subscribers for one dollar. We are willing to make a loss on a new subscriber the first year, believing he will find the RURAL WORLD indispensable ever after. We also send the RURAL WORLD in conjunction with either the twice-a-week "Repub" or the twice-a-week "Globe-Democrat" for one dollar and fifty cents a year, and new subscribers may be added at the fifty-cent rate. Published at this remarkably low price—at least as actual cost—all subscribers must see the necessity of our dropping from our subscription list every name as soon as the year paid for expires. Thus if, on the printed slip of each paper you see John Jones May 20, it indicates that the name will drop from the list at the end of May, and if he wishes to continue to receive it, he must renew his subscription. If he would do it a week or two in advance, it would save us the trouble of taking his name off the list and again putting it in type, when he renewed, which frequently causes mistakes.

A great co-operative scheme is being exploited in northwest Missouri and Kansas, regarding which we suggest to our readers who may be brought in contact with it that they exercise caution. Co-operation is right, and proper under proper conditions, but, like all good things, can be abused. There seems to be a good deal of the "theatrical" just now in the promotion methods, that to us does not look like sound business sense.

We are pleased to direct the attention of RURAL WORLD readers to the communication on this page from Secretary Ellis of the Missouri State Board of Agriculture regarding farmers' institutes. The State Board of Agriculture is thus early at work on the farmers' institutes for the coming season, and Secretary Ellis gives notice to farmers who want institutes in their respective communities to get in line at once. Mr. Ellis wants suggestions, too, as to how the institutes can be made the most successful, and he will be glad to get those through the RURAL WORLD.

TREE PLANTING IN ST. LOUIS.

The Engelmann Botanical Club of St. Louis, has issued quite recently a report of the Tree Planting Committee, which should prove very useful not only in St. Louis, but in other cities and towns. The special work of this committee is to develop more interest among St. Louisans in the beautifying of their city by planting and caring for trees; and that end has, for several years, been collecting information on the subject of tree planting in the cities of the United States and Europe.

The information contained in the bulletin just issued will, therefore, be of interest to all who are in sympathy with the effort being made to beautify the city.

That St. Louis is greatly lacking in that beauty that well cared for trees give, is painfully apparent to all observers, and it must be admitted that the city will suffer in reputation by this lack, unless, in a measure, remedied before the World's Fair is held.

The committee in its report says:

"One of the first questions which a newcomer to a city asks, is whether it is an attractive city to live in. Beauty in cities is brought about by fine buildings, wide streets, tasteful ornamentation of buildings, signs, posts, etc., and, above all by trees, shrubs and flowers. The latter not only please the eye, but serve to purify the air, to regulate temperature and to give shade."

The presence of green plants exerts a subtle influence on everyone. This influence is one which can hardly be denied, but it is one which all feel. The shrubs and vines give that to a house which makes a home. The city inhabitants lose much of the charm which they who dwell in the country enjoy. Especially is this true of the children. They become accustomed to flagstones, asphalt pavements and stone walls, and much of the sprightliness which life among the fields and woods gives to a child, is dwarfed and more often lost to the city

child. One of the first duties of every citizen of a large city ought to consist, therefore, in countering the city influence, and to aid in bringing as much as can be brought of the fields and woods into the city."

Then the report proceeds to tell how this can be done. We earnestly hope its teachings and those of subsequent bulletins will have a marked effect.

Copies of this report may be had by addressing H. C. Irish, Secretary Engelmann Botanical Club, Missouri Botanical Garden, St. Louis, or Dr. H. von Schrenk, Secretary Tree Planting Committee, Washington University, St. Louis, Mo.

Let us all lend a hand in this effort to bring "as much as can be brought of the fields and woods into the city."

CULTIVATION OF CORN.

The small corn crop of last year has affected the stock market as to prove very clearly the importance of this crop, and it is also evident that too much consideration can not be given to the present season's crop, as a means of overcoming the shortage from last year. A butcher, deplored the high price of meats, said to the writer: "I will have to close out my business because people are buying as little meat as possible." He also said: "It is costing me twice as much for feed for my horse as it did a year ago." Thus it is evident that the supply of farm products very markedly affect all conditions of life.

Now, in view of these facts it is important that the corn crop have intelligent care. The experiments of progressive farmers in recent years show that no general crop returns so largely for cultivation; but the old rule of three times going over the corn field is out of date.

If the few weeks following the planting after the corn is up prove to be cool, often the weeds get a start. Weeds thrive, we say, in cool weather, and they must be kept in check if the corn is to get a start. The weeder is the implement that will help the farmer to keep his corn clean, and it is coming into use more and more every year. A good farmer of our acquaintance has practiced going over the corn with the weeder each way and then following with the cultivator at each successive cultivation. A man with horse and weeder will go over more than twice the acreage that a man with double team and cultivator can. The weeder levels the ground and works through the hills just where the work is needed.

If there are doubts as to the profits of so much labor on a corn crop, select two corn fields and give one the old-time three cultivations and keep the other field well stirred, charging up to the latter the cost of extra labor expended and ascertain at corn gathering time if it pays.

THE CITY DAIRIES OF ST. LOUIS.
A Disgrace to a Civilized Community.

Mrs. Mary Waido Calkins of St. Louis has discovered (?) a horrible condition that exists in the dairies of the city, as will be seen by reading the article headed "A Discovery" (?) on page 2 of this issue.

That the condition as described by her exists we can fully substantiate from personal examination, but it will hardly be in order to credit Mrs. Calkins with having "discovered" the condition, excepting personally.

The conditions that exist in these city dairies have been repeatedly described in the RURAL WORLD, and they have been fully set forth in Volume vi. of the Report of the U. S. Industrial Commission, under the head of "Milk Trade of Cities and Towns" (pages 382-394). The Milk Trade of St. Louis, are well known to many citizens of the city, including members of the City Board of Health. It was in company with Dr. Howard Carter, former city milk inspector, and a reporter for one of the daily papers that the writer visited a large number of these city dairies and found conditions in some of them even worse, if that be possible, than those described by Mrs. Calkins.

The City Board of Health has been anxious to eliminate this menace to public health, but thus far has been powerless to do so, largely because of the fact that the powerful brewery and distillery interests of the city stand in the way.

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handled the milk produced little short of being poisonous, particularly to infants, and there is not the slightest doubt in my mind that hundreds of children are yearly carried from St. Louis homes to premature graves as a result of drinking this "swill" milk.

Some of our people have of late become somewhat exercised regarding the diseased and "doctored" meat, which, it is alleged, is being brought into the city;

and well they may be, but the danger to life and health from that source is not one-hundred part as great as is that from the 15,000 or more gallons of milk produced daily in the dairies that exist within the limits of St. Louis.

No large city in the country has less excuse than St. Louis for not having an adequate supply of cheap, wholesome milk, for none other has such an area of farming land coming to the city as does this city. The territory surrounding St. Louis for 300 miles in all directions is one of comparatively cheap land, yet admirably adapted for dairying, and the farmers only need to be given the promise of a market in St. Louis for their product to supply the city with an abundance of milk and cream produced under proper sanitary conditions.

We trust Mrs. Calkins' crusade against the "swill dairies" of St. Louis will be prosecuted vigorously and that the daily press and all the forces of the city that stand for the best interests of the community will support her in the fight.

Surely a city that aspires to hold an exposition in which to exhibit the world's advance in cultivation will not much longer suffer to exist so barbarous and disgraceful a thing as are these "swill dairies."

STUDY YOUR FARM.

In the early days of the application of science to agricultural matters it was thought by many that chemistry would easily solve all of the problems involved in soil fertility and plant growth. But the dream that the chemist, by taking handfuls of soil from a field and analysing it, would thus be able to tell all about its crop-producing capacity, what it lacked and what must be applied to make it most productive has not been realized. Chemistry has been very helpful to agriculture, but it has its limitations. Notwithstanding the high degree to which the science has been developed, no chemist has yet attained a skill as delicate and accurate as that possessed by a living plant in determining just how much plant food a certain field will yield; and so the investigators are coming more and more to appeal to plants for information along this line.

In a recent report from the Rhode Island Experiment Station, B. L. Hartwell discusses the difficulty of accurately determining the available or assimilable plant food in soils, maintaining that analytical results have frequently failed to account satisfactorily in the case of given soils for differences caused by known fertilization and cropping."

A German scientist, Dr. T. Pfeiffer, is quoted by the Experiment Station Record as referring to the unreliability of chemical analysis as a means of determining the fertilizer requirements of soils. He considers carefully conducted field experiments as the most reliable means of the farmer for determining the fertilizer requirements of his soils.

This is in accord with the view held by the RURAL WORLD, and which has led us to frequently urge upon our more desirous the desirability of their making crop and fertilizer tests on their own farms.

Every man's farm should be, to some extent, an experiment station, and if he will get in the way of doing his own investigating as to the crop-growing capacity of his soil he will soon get more intimate terms with his farm than is possible for any chemist. An acre of ground devoted to the investigation of its capacity for growing corn, wheat, grass and other crops under different methods of culture and varying application of fertilizers will in a few years add dollars to the value of every acre of the farm.

COW PEAS IN CORN.

Editor RURAL WORLD: I am contemplating planting cowpeas in my corn. As I shall cut my corn with a corn harvester and binder, I am somewhat at a loss as to the proper method of planting the cowpeas, so they may be cut, bound and shocked with the corn. I would like to ask some of your experienced readers what the following plan would work.

The corn is planted in check rows, the three feet eight inches apart each way. The corn will be cultivated both ways.

After the last cultivation, the shortest way, I think of using the hand corn planters and dropping the peas along the row the long way, so as to cultivate corn and peas once or twice after planting the peas. Can enough peas be raised in this way to pay for the trouble? How thick should they be planted in the corn row, the long way? Is there any doubt about the corn harvester being able to cut the corn and peas together in the row?

Is there any better method of planting the peas so they can be cut with the corn harvester and saved with the corn?

Has anyone tried this method, and if so, did the peas keep well, bound up with the corn?

I may want to feed it from the shock after husking the corn, or I may want to shred it. I think shredding the corn and peas together would make excellent stock food. Has any one tried shredding corn and making a big stack in the open field, near where it is to be fed? I think

the rain would not damage it much, but I fear the wind would play sad havoc with it. Which varieties of cow peas would it be best to plant in the corn row in the way suggested? Answers to any of these questions through the RURAL WORLD will be very thankfully received by

YOUNG FARMER.

NOTES FROM THE OZARK UPLIFT.

Editor RURAL WORLD: The condition of the drought sufferers was the subject of my last article, written in March. Since then, Pulaski county has received some assistance from without and within.

Through the generosity of the people of St. Louis Mr. Ed Williams,

county clerk of Pulaski county, procured a bushel of seed corn for each needy family in the county and afterward the county court donated \$100 to the deserving poor of the county. Of this sum each needy family received from \$2.50 to \$3.00. Much credit is due Mr. Williams for having started the relief agitation for this county.

Will some reader who has tried it please tell what value it has as a feed for horses?

I would be very thankful if some one would tell me if sheep may be turned into a field of ripe stock peas. I sow peas in corn at last cultivation and wish to graze with sheep and hogs in fall.

Success to the RURAL WORLD.

B. F. MITCHELL.
Oilon Co., Tenn., May 19.

We trust our readers will respond to Mr. Mitchell's request for information and that he will feel free to call for more at any time.

BEING COMPELLED TO GRAZE A PORTION OF THEIR WHEAT.

In an effort to secure an early feed for stock, I sowed one acre to oats and Canadian peas, using one bushel of each. At present they are 18 or 20 inches in height and promise a large crop. I sowed only one acre, as I had never seen the crop grown.

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CLOVER IN ROTATION.

Editor RURAL WORLD: The value of clover in rotation is now well understood. It supplies fertilizer nitrogen almost free of cost. In fact, but for this free nitrogen on many farms the usual wheat, clover, timothy, corn, rotation could not be followed with profit. For example, a 60-bushel corn crop uses 110 pounds of nitrogen, which in commercial fertilizer costs about \$6 or over 26 cents per bushel of corn. At this rate it would take a dollar corn to make a profit. Clover, of course, follows wheat, though it is a very rare thing for fertilizers to be applied to the wheat in sufficient quantities for the wheat itself, and the clover is expected to make the most of what it can scavenge together.

A crop of wheat, say an extra good one, uses about 57 pounds of nitrogen, 30 pounds of potash and 25 pounds of phosphoric acid; the fertilizer used was most probably 600 pounds per acre of a fertilizer testing 2 per cent ammonia (containing nitrogen), 8 per cent phosphoric acid and 1 per cent potash; that is, 12 pounds of ammonia, 45 pounds of phosphoric acid and six pounds of potash. Hence, the clover starts off with a soil stripped bare of nitrogen and potash, but containing a little available phosphoric acid. But the clover family is essentially a potash fertilization group of plants, and without this potash cannot store up fertilizer nitrogen. The wheat crop has drawn upon the natural resources of the soil for 24 pounds of potash per acre, and a good clover crop needs about 168 pounds more. Where is it to come from?

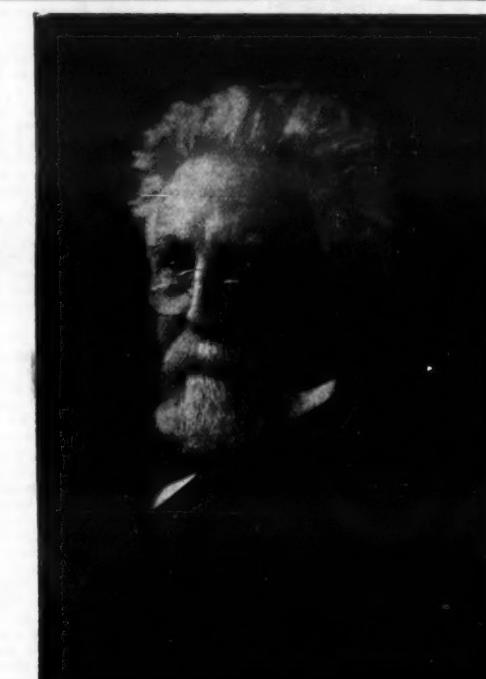
As a matter of fact, on most farms the clover does not get the required potash, and the farmer does not get the clover nor does the soil get the full measure of fertilizer nitrogen. The other name for this sort of soil starvation is "Clover Sickness."

It is quite plainly shown above why clover is apt to be short of potash when it follows wheat, especially soils many years under the plow.

There is nothing intricate in any farm

progress of the community upon the percentage of papers. Second to the agricultural press, I would place the farmers' institute or some form of farmers' organization. Any community desiring an institute this year should meet and organize by electing officers and appointing committees to take charge of the work and make application to this office.

Still possessed of the mental and physical strength of a man of 60 years, the readers of the RURAL WORLD may reasonably expect another decade of years to be added to the 50 and more Gov. Colman has spent in active participation in the work of advancing the ag-



NORMAN J. COLMAN.

ricultural interests of this country.

It has fallen to the lot of very few to touch so broadly American agriculture as has Gov. Colman—as an editor, in legislative halls, in agricultural organizations and at the head of the U. S. Department of Agriculture—and no might, in all good conscience, ask to be released from further service to the public, and yet, the world can ill afford to deprive of the benefit that age and experience can bestow. Therefore, the readers of the RURAL WORLD and the thousands of farmers throughout the length and breadth of this land who feel acquainted with and an interest in Gov. Colman join in wishing that many years of health and cheer will be added to the 70 that have passed ere he is called hence.

L. C.

On Friday last, May 16, 1902, Norman J. Colman, founder of COLMAN'S RURAL WORLD, reached the 75th milestone in his journey of life. The day was spent as had been thousands of others since more than a half century ago, Gov. Colman first assumed the editorship of what was then COLMAN'S RURAL WORLD and VALLEY FARMER—at the editorial desk.

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Horticulture

HORTICULTURAL TALKS.

W. D. C., GALENA, MO.—"If a bed of perfect flowering strawberries will not do well alone (one variety, I mean), please tell me why not in the next issue of the RURAL WORLD."

There is no reason why a perfect flowering variety should not set fruit and do well, providing it has been well cared for. Any variety may fail under unfavorable conditions, such as poor cultivation, unsuitable soil, etc. When other conditions are right, perfect flowering varieties ought to bear well, although experience has taught me that even staminate varieties will set and mature more good fruit when several kinds are planted, than when one staminate variety is by itself. I would not be too positive in this statement, for one of the finest and most profitable crops of berries I ever saw was a three-acre field of Ruby with another variety near. However, through many years of close observation I must conclude that the best results may be expected from fields containing several varieties.

A PLEASANT MEETING.—The Alton Horticultural Society met on Saturday, May 10, at the residence of Dr. Smith, next Godfrey, Ill. There was a fair attendance, considering the busy time of year. Several important points were mentioned and discussed.

BORERS.—Dr. Van Horne of Jerseyville, having been troubled very much in the past with apple and peach borers, said he had used the old reliable, though tedious method of cutting out and gouging with wire, and asked if the work might not be effectively done with less time and trouble by squirting a little oil or turpentine into the borers' run, and then shutting up the opening.

To this the writer replied that in putting in enough of such material to reach the worm there might be more injury done to the tree; and suggested for trial the use of bisulphide of carbon. If this were put in, and the opening closed with putty it would mean sure death to the insect and surely do the tree no injury. This suggestion was thought very feasible by those present, and I would be pleased to have others try the experiment and report.

THE GENERAL REPORT was for a fair crop of apples and pears. Ben Davis, who bore heavily last year, seems to be without exception taking a rest this year. Some showed very little bloom and others none at all.

Pears, especially Bartlett, Seckel, Duchess and Kieffer, promise well.

Plums set well as a rule, but the curculio is getting in its work quite lively.

GRAPES.—Major McPake gave an interesting and instructive talk on grapes. He said that some of the earlier varieties were killed back last winter, which he attributed as much to last season's drought as to the winter's cold. Campbell's Early is, with him, killed back each year. What a pity that a grape boomed as it was and sold by the million, should prove such a failure. All hardy varieties were reported in fair shape for a crop.

INSECT FRIENDS AND FOES.—A good crop of our dear little friend, the lady bug, was reported; our struggle would be still harder had we not her assistance in destroying those insects that injure our crops. She probably does more good in devouring the eggs of our insect foes.

The cut-worm seems to be more prevalent this season than usual. The best remedy for this is to wrap stiff paper around the stem of each plant. For large plantations use Paris green, with air-slaked lime. Get a good portion of the material on the ground around the plants. The worms don't seem to like crawling over the limy surface. Use the same mixture for melons, cucumbers, squash, pumpkins, etc., and apply it just as soon as the plants begin to break through the ground.

Show plenty of seed, allowing a few plants in each hill for the bugs, but don't let them have any if you can help it. Better have too many plants and thin them out yourself than trust to the bugs to do it.

The outlook for strawberries is a little more encouraging. Many report a prospect for a fair crop of extra good fruit.

EDWIN H. RIEHL,
North Alton, Ill., May 12, 1902.

MISSOURI APPLES THAT HAD BEEN SHOWN.

An apple twenty months old that is yet good to eat and has a very excellent flavor and is sound through and through is rather a remarkable and unusual thing. Such was the fruit that Mr. C. C. Bell, one of the Missouri commissioners to the Charleston Exposition brought to the office of the "Evening Post" and served to the staff on Saturday last.

The apple was the last of a lot of 140 barrels picked in a Missouri orchard on September 30, 1900, seven months before the Buffalo Exposition was opened and three months before the cornerstone of the first building at the Charleston Exposition was laid, yet it was exhibited at both those great shows and if the St. Louis World's Fair had not been postponed it might have been good for show there.

Mr. Bell has kept a careful record of the lot of apples which were of the famous Ben Davis variety. They were put in barrels in Missouri on September 30 and kept in cold storage until May 1, 1901, when they were shipped to Buffalo. There they were kept in cold storage and exhibits made from the lot all during the fair and many of them given away. At the close of the exhibition eight barrels remained and these were shipped to Charleston. The particular lot from which the famous apple came were taken from cold storage in Buffalo October 10, and loaded in an ordinary freight car on November 1. They arrived in Charleston Dec. 2, 1901, being thus thirty-one days in transit in a close car and subject to all the vicissitudes of railroad handling. On December 3 a selection from the lot was made and 25 pieces of the fruit were put on exhibit at the Missouri display in the cotton palace. At regular periods thereafter the display was celled and rearranged. The following is the record of the culling:

Feb. 24, 1902, reduced to 22 plates; March 8, 1902, reduced to 18 plates; March 18, 1902, reduced to 12 plates; March 27, 1902, reduced to 10 plates; April 8, 1902, reduced to 8 plates; April 15, 1902, reduced to 5 plates; May 1, 1902, reduced to 1 plate.

On May 3 only one apple was found to be entirely sound, and this was brought to the office of the "Evening Post" and cut open. It retained a good flavor and was firm throughout except a slight shriveling on the outside. While of course, not

so fine as a fresh apple, it was yet very good to eat. Seven seeds were found in it, perfectly whole and clean except one, which had already sprouted, and showed a well developed tendril. Mr. Bell said this was the first time he had known a sound apple to contain a sprouting seed.

The seeds were carefully preserved and planted by Mr. Bell in a pot of earth taken from the sunken gardens of the Ivory City, and the culture was presented to the editor of the "Evening Post." If the seedlings flourish it is probable that a new variety of apple will be developed and maybe it will make one of the interesting exhibits at the St. Louis World's Fair. The new apple will be known as the "Exposition."—Charleston (S. C.) Evening Post.

THE CANKER WORMS.

Editor RURAL WORLD: The canker worms are doing so much damage in parts of our state that I again send out note of warning. Spray the trees well with a Paris green, one pound to 100 gallons of water, to insure quick results. It is well to add four pounds of lime well slacked and thoroughly mixed to each 50 gallons of water. In spraying, do it thoroughly, and usually one application will suffice. If not, make another. In any case never let the canker worms destroy the leaves of the trees. These worms eat so ravenously that it is only a question of putting the poison on the leaves to save them to death to them. They are so easily killed with the Paris green spray that there is no excuse for not doing it.

Where fungous diseases are prevalent use the Bordeaux mixture, also, with the other. This is made by mixing six pounds of lime and four pounds of blue vitriol with 50 gallons of water.

L. A. GOODMAN, Secretary, Kansas City, Mo., 4000 Warwick Boulevard.

OKLAHOMA NOTES.

Editor RURAL WORLD: We live some distance from the postoffice, and in busy times our mail is a little old when it reaches us, but, oh! how fresh and refreshing is the dear old RURAL WORLD when it comes.

In the issue of April 16 I read an article by J. E. May, in which he says he smiled at the communication of "A. Greener," regarding whole-root trees. Nevertheless the article put me to thinking. I am a young man with little experience, but have just bought a nice farm and now have to improve. It is my aim to put out a nice orchard in the near future.

Regarding peaches and whole root trees, it seems reasonable to me that the peach-root tree will make the more rapid growth, because its roots feed nearer the surface; but when the trees are required to resist high winds and protracted droughts, it is not necessary that the root system be one that strikes deep, even if the trees do grow a shade slower?

I am thinking of planting the seed exactly where I want the tree to stand, and then grafting or budding, and thus avoid cutting the tap root. I also expect to have the trees a good distance apart to better enable the trees to resist drought. My ideas are open to criticism, and I would be pleased to hear from any one who thinks I am wrong, for it is knowledge that I am after. J. D. OATES, Pottawatomie Co., Okla.

PEACH LEAF CURL.

It is well known that the leaves do an important work for the plant. Any disease, therefore, that seriously interferes with the functional activity of the leaves, will prove detrimental to the health of the plant. Such a disease in the peach leaf curl, writes Wm. B. Hoag, in the "Southern Fruit Grower." It is caused by a parasite, the leaf curl fungus (exocystis deformans, Fuckel), which attacks both leaves and young shoots. This disease is too well known to require any description. The masses of hyphae pass the periods of late summer, fall and winter, in the tissue of leaf buds—that is, the mycelium is perennial in the buds. With the beginning of spring growth in the tree, there is growth of the fungus as well, the new leaves and shoots being affected as they are put forth. The amount of the infection determines the extent of the subsequent distortion.

It is evident that the fungicide cannot reach the leaves before emergence from the bud, and except in cases of treatment year after year, we cannot expect that the first leaves upon treated and untreated trees will show any great difference in the proportion affected by the fungus. But we may rightfully expect treatment during a given season to reduce the amount of surviving fungus mycelium in the leaf buds. This effect will not be manifest until the following year. The more immediate results to be expected from spraying are of much the same nature; they cannot be expected upon the earliest leaves, but the spraying may and does prevent the infection of the succeeding leaves and shoots. By this we see that thorough spraying the preceding season is even more effective in the prevention of leaf curl than during the season of its occurrence. The first spraying

I WILL CURE YOU OF RHEUMATISM

No Pay Until You Know It.

After 2,000 experiments I have learned how to cure rheumatism. Not to turn boar joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask no money. Simply write me a postal card and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatism Cure, for every druggist keeps it. Use it for a month, and if it does what I claim, pay your druggist \$5.00 for it. If it doesn't I will pay him myself.

I have no samples. Any medicine that can affect rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most obstinate cases. No matter how impossible this seems to you, I know it and take the risk. I have cured tens of thousands of cases in this way and my records show that 39 out of 40 will get those six bottles paid, and pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. Let me send you an order for the medicine. Take it for a month, for it won't harm you anyway. If it cures you \$5.00. I leave that entirely to you. I will mail you a book that tells how to do it. Address Dr. Shoop, Box 225, Racine, Wis.



Small crops, unsalable vegetables, result from want of

Potash.

Vegetables are especially fond of Potash. Write for our free pamphlets.

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A CUTWORM REMEDY.

Many complaints are coming to the RURAL WORLD of the great numbers of cut worms, and the damage they are doing this season, and we are asked to tell how to fight the pest. We know of no better way than that described by one of our Ohio correspondents, Mr. George D. Bowers, of Hardin County, O., about a year ago, therefore, we repeat the ravages of the worms, is as follows:

A neighbor told me he had just read in a paper that by taking green clover, dipping in poisoned water and placing it around in bunches, the worms would eat it and it would kill them. Not having green clover, I used green rye. I took an old dishpan, put water and Paris green in the pan, then took rye and immersed it thoroughly, and then placed bunches along a few feet apart, a small handful in a bunch. I then took middlings (barley and cornmeal) and used just enough Paris green to color slightly and scattered a small amount on each bunch of rye. When I got to the end of the rye, I just scattered a line of the poisoned feed on the ground a few steps.

Two days later I went out to look for results. At the first bunch of rye I found 25 worms, most of them dead and the others in a very sad plight. Under the next bunch I found 25 worms and under the third bunch I found 25. I counted no farther. I just said to myself, "That is good enough." I then examined the line of feed where no rye was used and found a good number along that, so I concluded to try another experiment. I prepared my poisoned feed, took my Planet, Jr., onion drill, filled the seed hopper and set it. I think to sow about seven pounds of onion seed to the acre, and started across the patch, leaving a "dead line," and as fast as I could walk I made several lines on top of the ground across around, etc., any way I wanted to go. Two mornings later I went to look for results. At several places I measured four feet in line, and counted worms. The smallest number I found in four feet was six, and the largest number 44. I exclaimed, "That beats rye and clover." It took but a short time, the expense was very small, and I feel very sure that very few worms ever crossed the "dead line." When they come to it they stop and feed, and generally die right there. Some will bury themselves before they die, but many of them do not have time for that.

TO DESTROY SLUGS.

Mr. Henry Tryon, entomologist, in an article in the Queensland "Agricultural Journal" on slugs, says: "Among deterrents, the use of tobacco waste may especially be recommended. This is composed of the discarded midrib or stout central rib of the leaf after it has been cured, and at present may be obtained at the tobacco factory at a mere nominal cost, say, about 5 shillings per ton. Lay the waste on the soil round the plants to be protected. When the slugs come in contact with it they secrete a thin film of mucus which floats from their strap-like feet as if to protect them from injury, but the tobacco waste is fatal to them. You may also make a decoction of tobacco from the waste in this way: Fill a barrel with the stems and cover with water. Let this stand for twenty-four hours. There will then ensue a slight fermentation. Drain off the water, and boil it down to the strength required. If you want a very strong solution, fill the barrel with fresh stems and fill up with the water already used."

TO CONTROL THE CURCULIO.

Prof. Green of Tulare county who resides near Farmersville, while engaged in irrigating his orchard recently unearthed a very large family of gophers. The Visalia Delta states that Mr. Charles Thompson, for that is his name, noticed one of the large fruit trees looking rather diseased and of any appearance other than thrifty. He began an investigation by digging away the soil from the base of the tree and was amazed to find a nest of gophers numbering ten. Not one escaped the rusty shovel to seek a more hidden home. To ascertain the exact cause of the sickly appearance of the tree, Mr. Thompson dug deeper and found almost every root that should be feeding life to the tree eaten into and severed from the base of the tree.

Mr. Thompson further stated that he knew the gopher was a destructive little animal, but had not been bothered with it before. He states as a preventive, however, where gophers are numerous, to pulverize glass and place it in the hole where the young tree is to be planted and the ground animals will flee from it.

Remember, the market for the honey is right at your door. I could sell my whole crop at the house. Remember, that when once honey is kept regularly at the village stores it will become as staple as coffee and sugar, and a much more healthful article of food. Every person who aids in increasing the use of honey is to that extent a benefactor of his race.

If I can help you with information along this line I will be only to glad to do so at any time. GEORGE ENTY, Pennsylvania.

THINNING APPLES.

Taking all the tests with apples into consideration, whenever there was a heavy enough crop to demand thinning the thinning always resulted in producing larger and higher colored fruit than was borne on the unthinned trees, says Prof. S. H. Brach in California Fruit Grower. Thinning the apples according to the plan which was followed, and afterward gathering the fruit when it was ripe, required about twice as much time as it did to gather the ripe fruit from corresponding unthinned trees. No method of jarring or raking off the superabundant fruit can be advocated, because by such methods the fruit is removed indiscriminately, good, bad and indifferent coming off together. When work is done by hand (which, however, is next to the most difficult in California orchards, owing to their size and the large number of trees) all wormy, defective or inferior fruit can be taken off and the best specimens allowed to remain as long as they do not crowd each other.

As to the time for doing the thinning, I am of the opinion that it should be done very early in order to secure the best results. It should be begun within three or four weeks after the fruit has set, without waiting for the second drop. The fruit should be thinner to about four inches apart.

FIRST MISSOURI STRAWBERRIES.

The first Missouri strawberries reached the St. Louis market May 10. They were grown by M. F. Becker of Maxville, Jefferson County, and were of the Michel variety, of fine quality, large and ripe. The berries were sold by William Hartman at \$2 per three-gallon tray.

THE WOODPECKERS ARE FRIENDS

of the farm and should be protected. They have remarkable tongues—probes they are. The bird has a keen ear and locates his prey by this sense. When he hears the chirping of a wood-boring beetle in an apple or other tree and lodges it with his sharp chisel bill and probe, it is likely that on his next rounds he will find a colony of ants enlarging the burrow of the dead grub. The bird now brings into use the same tools used in catching the beetle, and the ants are drawn out and devoured. Both insects are injurious to the tree.

How shall I make bees pay me? This question is frequently asked the writer. Then the questioner may go on to state that he or she has no love for bees, is afraid of getting stung and knows little about bees or their proper management.

My answer is always ready and quickly given. The longer you work with bees the more fascination they will have for you. The more you are stung by bees the less fear you have of being stung, and the less it will hurt you to be stung.

It is only a matter of reading a little, using your eyes and mind, and interviewing successful bee-keepers to acquire knowledge upon the subject. And, further, there is no necessity of being stung at all. Use a good bee veil and pair of gloves when working with the bees. It may not be just as easy to work with bees as with bare hands, but it will be better than being nervous from fear of being stung.

Start with a few colonies. These can often be purchased from some neighbor at a small price, especially if of the common black type. They can be put in improved hives and Italianized during the season. The increase will soon be high grade or Italian bees, and will be ready to do good work in gathering honey and will be easily handled. I have in my apriary colonies that have not attempted to sting me for three or four years.

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If no bees can be procured in your

DON'T FEED AN ARMY. GET A DEERING SHREDDER.



You can do it with a Deering Husker and Shredder, a machine easy to procure and easy to operate. Deering Shredders are built in ten sizes and are for all. The former is just the thing for the individual farmer, the latter the ideal machine for the big corn grower. The latter are built to save time, less horse power and fewer attendants than any other. For cleanly husked ears and edible fodder use the Deering. A beautiful illustrated Corn Annual mailed free on request.

DEERING HARVESTER COMPANY, CHICAGO, U. S. A.
Binders, Headers, Mowers, Reapers, Corn Binders, Corn Shockers, Huskers and Shredders, Rakes, Twine and Oil.

Burlington Route

The Growing Northwest

The greatest passenger train through the Louisiana Purchase is "The Burlington-Northern Pacific Express," daily



Live Stock

DATE CLAIMS FOR LIVE STOCK
HALES.

June 15—C. E. McLane, Danville, Ind., at Indianapolis. Double Standard Polled Durham.

The "National Hereford Exchange," under the management of T. F. B. Botham, as follows:

May 27-28, 1902—Omaha.

POLAND-CHINAS.

Oct. 30.—E. E. Axline, at Oak Grove, Mo.

BERKSHIRES.

Aug. 6.—A. J. Lovejoy & Son, Roscoe, Ill.

ABERDEEN-ANGUS CATTLE.

June 10-11—Combination sale, W. C. McGavock, Manager, Chicago.

Aug. 6, 1902—Berkshires; A. J. Lovejoy & Son, Roscoe, Ill.

Aug. 8, 1902—Combination sale, Kansas City, Mo.

Sept. 17, 1902—Combination State Fair sale, Indianapolis, Ind.

Oct. 1, 1902—Combination State Fair sale, Springfield, Ill.

Oct. 22-23, 1902—Combination Hog Show sale, Kansas City, Mo.

Nov. 6, 1902—Combination sale, East St. Louis, Ill.; Manager, C. H. C. Anderson, Carlinville, Ill.

NATIONAL SHORTHORN SHOWS AND SALES.

June 17—Combination Shorthorn sale at Kansas City, Mo.

October 22, 1902—Geo. W. Jessup, Rockville, Ind.; Charles F. Mills, Clerk, Springfield, Ill.

Oct. 31.—J. C. Hall, Hallsville, Mo., sale at Centralia, Mo.

Nov. 11.—J. L. Turrell, E. S. Stewart, Dr. J. F. Keith and J. H. Cottingham, at Sturgeon, Mo.

Dec. 3, 1902—Combination sale Berkshires, Manager A. J. Lovejoy, Roscoe, Ill.; Clerk, Charles F. Mills, Springfield, Ill.

SECRETARY WILSON ON BEEF PRICES.

Secretary of Agriculture James Wilson, is quoted as follows, regarding the "beef combine" and rise in prices of meat.

"I predict a fall in price of beef as soon as the grain cattle are ready for market. There is nothing to hinder the butchers in any city from making an agreement among themselves to put an agent in one of the Western markets for the purpose of buying cattle, having them shipped to their city, slaughtered and sold at a profit, providing they can get the same transportation rate given to every one else. Whoever gets a lower rate becomes a monopolist, as he at once gains a great advantage over all those who are discriminated against."

"We do not know whether or not there is a combination on the part of the packers to put up the price of meats, as I have no means of knowing. I do know, however, that, owing to the shortness of last year's corn crop, the farmers were not able to feed cheap corn to their cattle so as to fatten them for market.

"There are plenty of grass cattle in the country. Corn is high and the farmers have been giving it to their cattle at double the ordinary price—namely, \$30 to \$60 a bushel. They sent South for cottonseed oil so as to help to tide over.

"The farmers have been getting seven cents a pound for cattle on the hoof. The average steer going to Chicago dresses at fifty pounds to the hundred. It is easily estimated that if a calf costs seven cents a pound on the hoof it will cost fourteen cents when dressed.

"First-class beef dressed at about sixty pounds to the hundred, and the world's high water-mark along this line is between sixty and seventy pounds, but the average is about fifty pounds. This will give some idea of what meat costs the butcher. The choice cuts are always run up in price and this is why we have to pay so much for our meats. While beef will be cheaper when the grass-fed cattle are in marketable shape, this cause will not operate to reduce the price of the products of the hog, as that animal cannot fatten on grass.

"These are some of the prime causes for the high prices of meats. There are others of equal importance. Wages are good. In fact, they are higher than ever before. This enables every one to eat whatever he fancies. This condition creates a heavy demand for food products, and all of them are unusually high.

"Another cause for the increase in the price of beef is the drain on the corn supply to fatten horses and mules for our foreign markets. There is a large

demand for mules and horses for use in South Africa. These animals must be fattened the same as cattle in order to bring a satisfactory sacrifice.

Both shippers and commission men attribute the unusual market to the scarcity of the supply of beef cattle, and to the fact that cattle men are no longer alarmed over the pending proceedings against the packers charged with maintaining a beef trust. Cattle buyers believe the present high prices will continue and that they may even go higher.

WHO IS GETTING HURT?

No one has been getting hurt by this meat agitation but the farmer?

Have the packers suffered? It would hardly seem so when the minute demand fell off they were able to buy their stock at greatly reduced rates.

It is Farmers John Smith and John Jones who have been feeling the agitation. It is the man who has been feeding sixty-cent corn for the past six months, hoping and expecting to get 7 cents for his steers in May or June, which would have probably been the case if the national law of supply and demand had not been interfered with.

There are three parties concerned in the present controversy—the farmer who feeds the cattle, the packers who buy the cattle and place the product before the people and, thirdly, the consumers.

Of the three classes interested the beef-maker—the farmer—got decidedly the worst of it. The consumer easily goes along with less meat, the packers can lessen their expenses and do a smaller business, but what about Farmer Smith and Farmer Jones, who had steers ready for the market? The situation is about this: The consumer, believing he is being robbed by some one, calls on the government for protection. The officials in Washington are quick to respond, and in striking at the packers hit every cattle-feeder in the country. So far, all that has been done has benefited no one.—Live Stock World.

MORE BEEF GROWN IN THE EAST.

We have long claimed that beef-raising may be made to pay in the east as well as in the west. We do not mean that it can be made to pay as large a per cent of profit on the investment in the east as in the west, but that it may be made to pay in the east on the arable farm. There many have denied. They have advocated that only such lines of stock production as dairying, poultry-raising and growing winter lambs can be successfully prosecuted by the eastern farmers. But this view, which has so largely shaped the farming of eastern agriculturists during the recent years, is now beginning to lose its hold upon the people of the east. Some of them are beginning to claim that they can grow meat as profitably as it can be grown in the west, says "The Farmer."

That they can grow it as profitably we do not believe, and for several reasons.

First, the land is much more productive in the west, hence food is more abundant.

Second, no expense is incurred as yet in the purchase of artificial fertilizers.

Third, any foods that have to be purchased are cheaper in the west than in the east. But the time is coming when the conditions will be more evenly than at present, and it is coming speedily.

Land is going up in the west at a rapid rate, and it will go still higher. In the State of Illinois land is worth from \$50 to \$100 an acre for farming uses. In the State of New York much of it is not worth half that sum. This means that with the same investment the farmer in New York can purchase from two to three acres for every one the farmer in Illinois can purchase for the same money. The trend of all this is plain. The cheaper the land the less intensive the character of the farming must needs be in order to make it pay. This means, therefore, that the New York farmer can get pasture at a much lower rate than the Illinois farmer, and everyone knows how very important pasture is as an element in cheap beef production.

There will be more or less of readjustment in methods as time goes on.

With the increase in the price of land that is going on in the entire Mississippi basin, the farming must of necessity become more and more intensive, and the lower the drop in eastern lands the less intensive will it become. Because of this the area of pasture lands may be expected to become more and the area of cultivated land less. With the increase of pasture land comes a relative increase in meat production. More animals, therefore, will be introduced onto those eastern farms. More fertilizer will thus be made on the farm and less purchased, and consequently the expense of running those farms will be correspondingly reduced.

This mean, should it take place, that the farmer in the Mississippi basin will get less for his meat? Not at all. The consumption of meats in this country is increasing at a more rapid rate than the production of the same. The 70 millions of this country will soon be 100 millions. While there will be waves of depression and inflation in the prices of produce, the natural tendency is toward an increase of interest to higher levels, when food products are averaged. Average the price of coms in 1850 with that of 1850 years ago, and it will be found that the average is much higher now. It is much higher than it was twenty years ago, when all parts of the country are included in the computation. Who will there be any advantage from increase in meat production among eastern farmers? Advantage will come to them from increase in the acres of pasture, which will mean increase in the quantity of fertilizers made and less of a drain in the food elements of the soil. Advantage will come to the western farmer in the higher price that his cereals fetch when purchased for finishing the meat grown in the east. Such a change would lead more and more to the feeding of home-grown products within the limits of the United States, and consequently to the restriction of those vast stores of fertility that are now sent over the sea in a stream of mighty volume and incessant flow.

LIVELY CATTLE MARKET.

Chicago, Ill., May 14—Cattle prices were higher in the Union stock yards in Chicago today than for almost twenty years. The top price for the day, \$70, was 10 cents in advance of the price of the high mark last week. All the offerings were snapped up, and the buyers clamored for more. The receipts fell below the estimates, amounting to 13,000 head.

A very little of what would be called "low pressure" feeding is done in Kansas. The treatment of cattle, up to where we speak of beginning to feed—put the cattle into a fed-lot—could be called "low pressure." But when feeding proper begins it is in the desire of the feeder to make as rapid gains as possible—have the cattle consume large quantities of the best of fattening feeds

not only did cattle prices go skyward, but the prices of hogs and sheep made record marks for the year. The market throughout was active and strong. There was an unusual demand for feeding cattle, which remained unsatisfied.

While the cattle market was booming,

and the buyers for the packers were

rushing around for choice offerings, de-

puty United States marshals with bunches

of subpoenas in their pockets were

hunting down the packers. The sub-

poenas, thirty-four in number, are the

formal notice of the filing of a suit

for injunction. Attorney John B. Miller

is expected to enter an appearance

for all the defendants served when the

time comes.

KEEP GOOD ANIMALS.

No one who depends upon his farm in-

come for a living can afford to keep non-

paying animals, says "Farmers' Guide."

Keep no more horses than there is honest

work for. If it should be raised

in the winter, it should be fed.

And now the way the Globe is raised

is to turn a little lower.

The farmer whistles round his barn,

With the "Junior" by his side.

His way seems fair and bright.

For a "Lamb" and a "Pig."

Or when a lamb is needed;

And for a "Light to your pathway."

Dietz "Junior" takes the lead.

R. B. DIETZ, Jr.,

Established 1840, 92 Laight St., N. Y.

—MERRY HAMPTON BRINGS \$15,000.

Merry Hampton, pronounced by many

the leading judges in America to be the

best Shorthorn cattle they ever saw,

has just been sold for \$15,000, and he is

now the highest priced bull living in any

breed. C. C. Bigler & Sons, of Hartwick,

were the purchasers and C. B. Dustin,

Mr. Merriman, the Messrs. Dustin,

and Farmer Jones, who had steers ready

for the market?

THE RAVENSWOOD HERD.

One of the choice herds of Shorthorn cattle in America is that of Capt. C. T. Leonard & Son, Bell Air, Cooper Co., Mo.

The present herd was founded on three cows

purchased at the New York Mills dis-

play sale at a cost of about \$1,500.

The best bulls obtainable have been

raised on these cows, and their product

is principally Scotch breeding and with

grand results, as the herd will show.

The champion Shorthorn bull, Lavender

Viscount, 124755, which has defeated ev-

ery other bull in the state for the last

three years, is the strongest show

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Horseman



STALLIONS ADVERTISED.

The following stallions advertised in the RURAL WORLD for the season of 1902 are well worthy of patronage:
Red Roy, 2:34; by Red Heart; Henry Heilman, Hallin, St. Louis Co., Mo.; Supro, 2:10 by Electricity; Alexander & Redshaw, Tipton, Cooper Co., Mo.; Wilkesgold 2333, by Red Wilkes; W. F. grade, Pocahontas, Cape Girardeau, Mo.

Monitor Russell 3377, by Alley Russell; D. S. Perdee, Walker, Vernon Co., Mo.

Monrond 2862, Matine record 2:36, by Allendorf; R. C. Brownlee, Holden, Johnson Co., Mo.

Monward 1847, by Hudson, 231 son of Kentucky Prince, 2470, Dr. William Colman, Sterling, Rice Co., Kan.

Woodsprite, by Nutwood, 60; Limestone Artist, 99, by Artist Monroe 21, and the great show jack Limestone Mammoth 28; L. M. Monsees & Son, Smithton, Patti Co., Mo.

Mondorf 2209, by Allendorf, 2:19, son of Onward; Thos. H. Moore, Troy, Lincoln Co., Mo.

Wilkesgold 2360, son of Red Wilkes; H. H. Eisenbath, Josephville, St. Charles Co., Mo.

THE PROXY QUESTION.

A good deal has been said of late in some of the horse papers against allowing the members of the American Trotting Association to be represented by proxies in that association. We believe these papers desire to be fair, and that their opposition arises on account of their not understanding the real facts in the case. We think their attitude would be entirely changed if they understood the true situation. We do not know that we shall be able to elucidate it so that they can understand it, but will try to do it.

The first question that arises is can a member or a stockholder of any organization be denied the right of being represented by proxy in said organization if he is unable to be present? The statutes of Michigan, under which state the charter of the American Trotting Association was procured, gives to every member and every stockholder the right of being represented by proxy in any organization of which he is a member.

The courts of Michigan, as well as of other states, have established that right. One cannot be deprived of it. If denied it, the courts would step in, if called upon, and assert that right. There can be no question in regard to this.

In what a humiliating situation the American Trotting Association would have been placed had it indeed the request of one of its members and thrown out the proxies that had been sent there to be voted! Does any one doubt that the courts, if called upon by any rejected member, would have reversed the decision of the Association? This is simply the legal aspect of the case, and editors, even of horse papers, have a high respect for the law.

But suppose these papers could have their way, without any violation of legal rights, and reject or abolish the proxy system, in what situation would it leave the members? It would in reality disfranchise every one not able to send a representative to the Trotting Congress! Do these papers, if they legally could, want to pursue such a system of wholesale disfranchisement? Do they want to deprive members of any voice in their own organization? Not one in ten able to raise the money and defray the expenses of a delegate to attend the congress. This fact is proven by the few members that do attend the meetings. Every member is notified of the meeting, and solicited to attend, and in case he cannot attend to appoint a proxy. He can appoint whomever he chooses. He is in no way restricted in this. He may or he may not appoint a proxy. He is not obliged to do it. If the affairs of the Association are managed satisfactorily to the member, it may send on a blank proxy to the secretary, which is, in substance, saying, we are satisfied with your work, continue it. If not satisfied the member has the right to attend, or to send his proxy to whomsoever it chooses. That is the real situation now. How can it be improved? Certainly not by disfranchising 96 out of every 100 of its members! And if any one were unwise enough to want to do this the law would step in and prevent it. The American people are jealous of their rights, and will not quietly submit to being deprived of them.

This is not written in querulous

spirit, but to let those who are now opposing the proxy system know that there are legal objections to overcome, and even if they are overcome it would lead to an almost wholesale disfranchisement of the trotting association of the country.

Are horsemen getting ready to make entries for the races? Never was a better opportunity afforded to Missouri horsemen than is presented this season. Commencing at Moberly, July 29th, there are seven weeks' continuous racing, going from Moberly to Columbia, then on to Rich Hill, Sedalia, Holden, Harrisonville, Pacifica, Kas., and then going to any one of half dozen meetings that will follow. Or the horsemen in extreme E. W. Mo., and Kansas can begin at Fort Scott, Kas., Aug. 28th, and go to Nevada the following week, and thence to Rich Hill and then follow the circuit spoken of above. Of course it is not expected that the horses of extreme speed will enter these circuits. They will look for larger stakes and purses. But the purses offered in the Missouri circuit, are quite liberal and will satisfy the average horseman.

Nancy Hanks, 2:04, has proven a most prolific brood mare. Her fifth foal was a fine filly by Peter the Great, 2:07. She has had two by Arion, 2:05, one by Bengal, 2:05; one by the thoroughbred stallion, Meddler, and this one by Peter the Great. She, as well as the trotting sires to which she has produced, and all her foals are owned at Forbes' Farm, Ponkapa, Mass., and if she lives to attain the average equine age, she will leave a big leg.

Rydsky's Hambletonian was only two years old when he begot Alexander's Abdallah, and the latter when four years old begot Goldsmith Maid, 2:14. Axlet, 2:12, after an arduous campaign as a two-year-old, begot the fast and game Elleroy, 2:19, when he was three years old.

Col. R. L. Harriman has returned from Stuttgart, Ark., where he conducted a three days' trotting meet and Hereford sale for the Stuttgart Live-Stock Co. of Mr. P. Reisch, a former Cole Camp, Mo., man, the horse. Mr. Reisch has been in Arkansas 20 years, and has acquired a fortune. He owns 5,000 acres of the best land in the state, several large stores and a fine lot of thoroughbred horses and cattle, and is, according to Col. Harriman, a man of whom all Missourians ought to be proud. The sale was most satisfactory, cattle selling well and horses bringing from \$300 to \$1,500. Mr. Harriman also owns Memphis, Pine Bluff and Little Rock. At the former place he inspected the fine new race course, built by C. K. Billings of Chicago, at a cost of \$50,000. There he saw "Narrita," the splendid stepper that he formerly owned, and at Pine Bluff he was the guest of Mr. Hearn, his present owner.—Benton Paper.

BLUE BULL NOTES.

By L. E. Clement.
A letter from a prominent citizen of Jefferson City calls my attention to the fact that Charley Burch, 2:13, dam by Blue Bull, is again in Jefferson City. Last year when at Jefferson City I saw Mr. Allard who had the horse in charge, and I saw the horse Charley Burch, 2:23%, dam Kate C., dam of Deck Wright, 2:06, by Quinal Chief 275. Quinal Chief is by Pocahontas Boy, and his dam is Sally, by Blue Bull, dam of Clarence H., 2:24%; by Ajax, brother to Artemus, sire of Charley Burch, 2:23%.

I will note that the dam of Charley Burch is the dam of a 2:10 pacer, and her daughter, Effie, by Ajax, produced the New England pacer wonder Terrell S., 2:10%, by Strathmore, with 40 heats in 2:25 or better. Last year a story was started that a stallion had been formed to send West and buy a pacer that would beat Terrell S., 2:10%. It started from a quill in a local paper.

Terrell S. is the fastest pacer sired by Strathmore and out of a sister in blood Charley Burch, 2:23%, trotting stallion, out of his dam sired by a brother to his sire. The second fastest, Eleanor, 2:11, is by Grindin's Blue Bull, and the third and fourth fastest are Herliam, 2:11%, and Strathmore, 2:13, out of Hope So, by Blue Bull. It will be seen by this that Ajax, Artemus, and Strathmore have also a two-year-old draft stallion which we do not believe can be excelled in the state. The admirers of that breed of horses could afford to go a long distance to see this great two-year-old colt.

Notwithstanding the many great stallions that Mr. Brandt has owned and the love he has for fine horses, he is a very practical man, and his mind naturally turns to cattle. He has netted large returns from feeding-beef cattle the last few years. He has a thoroughbred ten-months-old Shorthorn bull that we chance to say that it would be hard to match in the state. Mr. Brandt has a fine farm of over 400 acres near Montgomery City, only 80 miles from St. Louis. It is a very productive farm, and he is talking of selling it and removing to the Republic of Mexico, where a brother is living. We do not know of a more desirable farm. It is only a two or three hours' ride by rail from St. Louis, in a high state of productiveness, well adapted to grass and corn, and right at the county seat or it soon will be of Montgomery County. Mr. Brandt has still one large, fine jact left for sale, which he says he can highly recommend as a breeder. Any one having the time to spare can well afford to pay Mr. Brandt a visit.

\$5,000 Reward.

Anybody can secure that amount who will prove that any letter or endorsement which we publish is untrue, relative to the merits of Tuttle's Elixir.

Used and endorsed by Adams Tuttle's American Condition Powders

A specific for impotent blood and all diseases arising therefrom.

Tuttle's Elixir, comes in capsules, tablets, etc. Killers instantly. Our 100-page book, FREE.

S. A. TUTTLE, 32 Beverly St., Boston, Mass.

Beware of so-called Elixirs—none greater than Tuttle's.

Avoid all others, they offer only temporary relief. If any.

saying he is "balanced" is because his head is secured at exactly the proper height in connection with the carrying of the necessary amount of weight on each foot, and each and all his feet shaped to angle that conforms to the peculiar conformation of each particular angle and leg," etc. Yes, if his feet are in proportion and at a correct angle to the limbs they support his gait will be rhythmic and frictionless, therefore the whole body, including the head, will be in correct carriage. He says, "A horse may be carrying the required weight of shoes and yet be unbalanced." Quite likely, if he was correctly "balanced" nothing but a most outrageous and bungling use of farriery could throw him out of "balance." He would be capable of striding even and true without any shoes, and at speed at that. What he says about raising or lowering the head—by use of cheek reins, presumably—to an unnatural and incorrect position would naturally throw him "out of balance." But what he says about the hitch, etc., throwing him "out of balance," according to my experience, is not correct, if a horse is correctly "balanced" so that the articulation is correct, different hitches, so that his head is not "checked" into an unnatural, and therefore an uncomfortable position, cut not change the rhythm of his gait. Now more than he speaks of that he "balanced" by shoeing "light in front and heavy behind," was not "balanced," and he produced an artificial balance in the manner mentioned, and her foal shod in the same manner paced.

I am a 2-year-old for a friend of mine some seven years ago. I put his feet in proper proportion and at a correct angle to the limbs and directed him to drive him barefooted. He was irregular in his gait when he brought him to me. He went on driving him, and he was a pure-gaited trotter. A. Smith, a neighbor of his, bet him he could shoe the colt so he would pace. My friend took him up and let him shoe him. He put three-ounce shoes on the fore feet and eight-ounce shoes on the hind ones. Yet he would trot as square as he had trotted barefooted, after I had "balanced" him. He let him have another try at him. He and his took off the fore shoes and left the hind ones on, but the colt would do nothing but trot even and true, the same as he did barefooted. He was "balanced" naturally, and all the irregular weights of shoes could not make him take any gait except the one that was most comfortable for him, and that was the trot. He speaks of others that he balances by heavy shoes at one end and light at the other. How long'd he ever know horses balanced in such a manner to continue to be race horses? Pretty short time, I reckon.

How would he have done with my mare? She wears about 7 to 7½ ounces on each of her four feet, all alike—a No. 1 light hind shoe on all. I was speeding her the other day and she lost one of her fore shoes. I ascended when I returned to the stable that she had loosened it in the stall, but the regular grommet did not hit her for me, or I should have known it. The loss of it did not interfere with her true, even gait, and she carried me a mighty clip. She was "balanced," her feet were in proportion and at a correct angle to the limbs they support, so that her joints and tendons all worked in a correct manner. Just the same as it would be with a man; he could run just as well with a slipper on one foot and a shoe on the other, could he not, even if the shoe weighed seven times as much as the slipper? His joints being all in good working order there would be no perceptible difference in the comfort or travel; the same exactly with a horse if he is "balanced" on the lines of correct farriery.

I have driven her with three-ounce tips forward and 7½ shoes behind; it made not the slightest difference in her gait. I tried the three-ounce tips all around, but the hind ones wore out too fast, so I put on shoes behind. She wears no check rein; open bridle and plain jointed bit five-eighths of an inch thick.

Jay-Eye-Ses and Direct were both of them "unbalanced" when I was called to supervise the "balancing" of them. When they made their records Jay-Eye-Ses wore three ounces on each fore and four ounces on each hind foot; Direct was four ounces on each fore and five ounces on each hind foot.

Dear Governor, you know that my book that you are advertising for sale,

MICA makes short roads.
AXLE and light loads.
GREASE good for everything that runs on wheels.

Sold Everywhere.

Made by STANDARD OIL CO.

FREE TO HORSE OWNERS

To every man who will write us 1-That he is a horse owner; 2-That he has never used this remedy; 3-The horse is healthy; 4-It directs him.

4-That if found satisfactory he will call for the regular goods at his dealer's or at the general store, we will mail absolutely free a box of

BICKMORE'S GALL CURE.

It is known and used all over the world for Colds and Sore Throats, Cuts, Scrapes, Bruises, etc. It directs the horse to take the medicine.

It is safe and works the horse to take the medicine.

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Home Circle

ONLY ONE WAY IS RIGHT.

"My boy," said Uncle Hiram, once, while giving me advice, "The saw that doesn't wobble is the one that cuts the ice. The saw that closes apples itself, within its narrow groove, will soon or late fulfill its work by keeping on the move. When half way through, temptation may beset it, like as not, to leave the place that seemeth hard and seek a thinner spot; But shifting saws will tare, at length, when failure they invite. There's many a way o' doin' things, but only one way's right!"

"And bear in mind, my boy, through life, if tempted tasks to shirk, success is but a second crop, the aftermath of work. A lubricator tried and true is Perseverance Oil."

And Fortune's smile is rarely won except by honest toil. "A safe cross-cut to Fame or Wealth has never yet been found; The men upon the heights to-day are those who've gone around the longest way, inspired by the sayin', somewhat trite: There's many a way o' doing things, but only one way's right!"

I knew my Uncle Hiram had achievement's summit reached; I knew him an honest man who practiced what he preached— And so I paid the lesson heed, and rapt attention gave, When, in an added afterthought, he said: "My boy, be brave! Act well your part; tenaciously to one straight course adhere; Though men declare you're in a rut-work on, and never fear; You'll realize, when at length, have reached achievement's height; There's many a way o' doin' things, but only one way's right!"

—Roy Farrell Green in Success.

Written for the RURAL WORLD.

MAY MYRTLE'S FLOWERS.

I believe that I am as busy on my five-acre place as most farmers' wives are on a many-acre farm.

In April we left our city home and came back to the suburbs, renting the down-town place, which had to be thoroughly renovated for our tenants.

Without other help than a young colored boy I got the work down there done, our tenants settled and then began to clean up the house here, arrange furniture and make garden.

We have now an abundance of lettuce, radishes, onions, asparagus and spinach, with potatoes, corn, beans, cabbage, tomatoes, beets, salsify, carrots and parsnips growing finely. Peas are in bloom.

In flowers from seeds planted and attended to by myself exclusively, I have nasturtiums, sweet Alyssum, sunnias, marguerites, carnations, asters, phlox drummondii, larkspur, poppies, marigolds, castor beans, cosmos, salvias and petunias. I did not plant sweet peas this year, as my little friend and neighbor, "Carolyn Fern," grows them in such profusion and supplies me so generously with them that I do not need to grow them. Pansies I have ceased to cultivate because they need several transplantings to perfect them, and I am not quite equal to so much stooping.

In sowing flower seeds the chief requirement is to have the soil rich and thoroughly pulverized.

I do not see why every one may not be successful with flowers if she really cares to grow them. I have many beautiful climbers on my annuals. The one I like best is the cypress vine, it is so feathery, and the flowers are so bright and cheerful. It is a rich, vivid green and grows in such luxuriance that I admire it very much.

I quite believe in "Jack and his bean stalk" now. I think the bean was a casting bean. One evening I noticed a showing of pink just above the ground where one of these seeds reposed, and in the morning I looked again, and there was the entire stalk two inches high, and the first two leaves were out; they looked rather pale, but by eventide had assumed their natural color and the stalk measured four inches.

My oldest grandson—aged three—asked me one day what I liked best. I told him "babies, birds and flowers." He said, "and next best." I replied, "Horses and dogs." He reflected for some time, then inquired, with some solicitude, "Gram, don't you love peoples, too?" Yes, dear! I love a great many people, but not all. I like all babies, birds and flowers." He was not entirely satisfied with my reply, but ceased to ask questions.

Speaking of babies, I have now five grand-children, all bright, sweet, healthy and handsome. I am a doting fond old "Gram." I assure you. These small people, for whom I keep a never empty "cookey jar," and to whom my life is very devoted, keep me absent from the Circle many times when I might otherwise be present. I find time to read the excellent letters on all the excellent pages, Home Circle first, then the others haphazard. When spring comes I feel the garden spirit stirring my blood and can no more help going out and planting things than the sun can help shining. I declare every year "this is the last," but when the first crocus calls, out I go, sunbonnet, spade, trowel, rake, hoe, anxious to till until my every muscle aches.

Ah, well, why should we not love old mother earth? Some of these nearing days we shall all rest in her bosom, and those who are weary, methinks, will sleep the best.

I meant to have spoken of the reunion. I am much pleased with the idea and stand ready to contribute my mite to the

HOW'S THIS?

We offer One Hundred Dollars Reward for any case of catarrh that cannot be cured by Hall's Cough Cure.

F. J. CHENEY & CO., Proprs., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm, West & Trux, Wholesale Druggists, Toledo, O.

Walding, Kinnan & Marvin, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c per bottle. Sold by all druggists. Testimonials free.

Halls Family Pills are the best.



WILL HAWTHORN CONNER.

ing the change get a man who would be overpaid with half the money, when his real worth is taken into consideration.

We are encouraging and fostering too much unrest and too much mental friction as well as too much physical examination. Only yesterday a physician said to me that he must say he had frequently been called to see overworked women, but not often one who was actually suffering for bodily exercise.

Plenty of the best homes in our country to-day, both city, town and on the farm, are presided over by overworked wives and mothers, who, rather than be annoyed by inefficient help, and not infrequently because none of any kind can be had, are burdened with all the management of the home, care of children and an effort to be ready at any and all times to entertain visitors. This overworked problem is not confined to the fairer sex by any means—not to wives and mothers, especially, but to all who are overtaxing physical and mental endurance to excel in their calling and make a record above any previous year.

We to-day see men going early to their graves who have in 40 or 45 years lived three score or more in the experiences of men of three-quarters of a century ago. What we ought to do is to live more slowly, perhaps, but live constantly.

Some there who take somewhat of the nature of the touch-and-go about when the sun shines or circumstances are propitious, but go into a comatose condition when fronts begin to bite.

A well-balanced man is a rare article.

A woman well said, "Oh, wad some power the gittie gi us to see ussel as theirs sees us."

Recently a mother asked of her husband and children what they would choose if offered anything they might wish. The father was requested to answer first. He said, "Three to five years at school." One boy, eight years of age, who had his first skates, said: "About three years' skating." Another boy felt the same way, while the mother said she was just thinking she would like to put her time in at an art school, and so you see the whole matter depends on our individual view point from which we look out on the unexplored field before us.

Pettie Co., Mo. W. D. WADE.

Written for the RURAL WORLD.

HOW TO CARE FOR SUMMER MATTINGS.

Written for the RURAL WORLD.

REMINISCENT.

It seems some of our Home Circle writers are bent on digging up old relics. Messrs. Lyon, Linton and Dype have been reminiscent, and in a recent issue E. V. has awakened the dreams of the past by alluding to her girlhood days. How well do I remember when I, too, was a little school girl, and we used to make playhouses in the woods, decorating them with the wild flowers and moss. We would make crowns of leaves pinned together with thorns and decked with crabapple blossoms, etc. Surely those were our happiest days when "not a wave of trouble rolled across our peaceful breast." But, alas! how few of us can say that now.

I was somewhat amused when I read Mr. Lyon's article, in which he spoke of the corn marker; that is a relic that we have long since buried, and to stay, too, it sounds like old times to hear it spoken of.

Why doesn't Mr. Lyon come out here in Missouri and buy a prairie farm where they don't use hillside plows and corn markers, and not even fertilizers, manufactured ones, I mean? There are plenty of farms on which he could plant corn rows a mile long and not see a stump or a rock. They would be level enough to see the corn in the row from end to end, the other, if it were straight enough and his vision was sufficient to see that far. I think Mambrino, Jr., would delight in taking him behind one of those last horses he puffs (?) so much about and in showing him the fine country adjoining Kahoka, Memphis and Wyandots. I know all of the RURAL WORLD readers would be glad to see Mr. Lyon and hear him talk. We might seem to him a little backwoods, but we are true Missourians and are willing to be shown.

He seems to have considerable interest in Missouri, anyhow, for he refers to it oftener than any other state except his own.

I do wish some one would dig Mr. Heaton up so we could have the benefit of some more of his "Week by Week," or it was only monthly by month it would be better than not at all. I suppose he has been so taken up with city life he doesn't want to mingle with us" "Courtney" any more.

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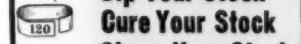
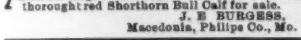
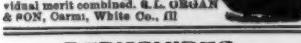
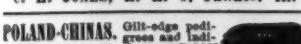
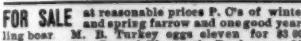
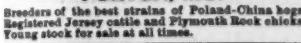
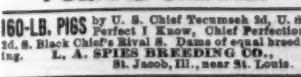
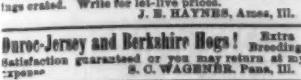
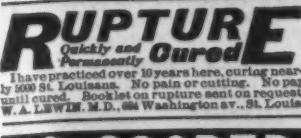
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I do wish some one would dig Mr. Heaton up so we could have the benefit of some more of his "Week by Week," or it was only monthly by month it would be better than not at all. I suppose he has been so taken up with city life he doesn't want to mingle with us" "Courtney" any more.

Why doesn't Mr. Lyon come out here in Missouri and buy a prairie farm where they don't use hillside plows and corn markers, and not even fertilizers, manufactured ones, I mean? There are plenty of farms on which he could plant corn rows a mile long and not see a stump or a rock. They would be level enough to see the corn in the row from end to end, the other, if it were straight enough and his vision was sufficient to see that far. I think Mambrino, Jr., would delight in taking him behind one of those last horses he puffs (?) so much about and in showing him the fine country adjoining Kahoka, Memphis and Wyandots. I know all of the RURAL WORLD readers would be glad to see Mr. Lyon and hear him talk. We might seem to him a little backwoods, but we are true Missourians and are willing to be shown.

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RAPE FOR HOGS.

I will tell you what I know about rape. I have two lots about ten rods square. Lot No. 1 was plowed and sowed to wheat and oats at the rate of 6 bushels to the acre, using disk seeder, about April 1, writes a correspondent in "Wallace's Farmer." When the grain was just coming through the ground I sowed about two pounds of rape and dragged it over once. Lot 2 was sown with two bushels of wheat and oats and five pounds of rape per acre, using disk seeder, at the time the rape was sown on lot 1. When the grain in lot 1 was about four inches high I turned in eight sows and their pigs and left them in a week, then a week in lot 2, and so on, changing back and forth each week until the middle of August, when I put twenty young boars in lot 1 and kept them there until I sold them. I sold the last the 9th of December and had good pasture until we had two or three hard frosts. In lot 2 the rape and grain was all gone by October 1. If I had sown six bushels of wheat and oats to the acre instead of two, the pasture would have been better as the hogs will not eat the rape while they can get other green feed, and this gives the rape a better start. One can turn in sooner by sowing grain with rape than if sowed alone.

SORE MOUTH.

Breeders, we see, are having some of the same old troubles with their pigs that our older breeders had many years ago, one of which was sore, or cankerous, mouth. It was for a long while a puzzle as to the cause, and when once affected the cure was still more troublesome and uncertain, says the "Western Swine Breeder." We learned years ago, to our satisfaction, at least, that the cause was simply blood-poison caused by the little rascals quarreling and fighting at the dinner table for the best and most of the meal that was placed before them by the mother hog. If the litter happened to be large, and the meal too scant to satisfy the appetites of all the youngsters, a fight, or numerous fights, would ensue, and their little keen tusks would be used on each other with great skill and effect, and the nose would receive the wounds, and blood-poison would follow, and death generally end all so afflicted. As prevention is better, at all times, than cure, all this trouble and loss can be prevented by clipping the four large tusks found in every pig's mouth. Especially should this be done when the litter is large. The best instrument to use is a strong pair of old shears broken off within an inch or so of the rivet and ground to a point.

THE SWINE PROBLEM.

In selecting a breeding boar, I want him to be in his full developed pighood. In general make-up, strong medium with a well-finished head, rather striking in appearance, for an extra head and fine top are the two most essential points in making a fine looker, writes S. E. Schellenger, in the "American Swineherd."

My general observations have been that the hardest thing the breeder in general has to contend with is the creases or sag back of the shoulders, both on top and on sides, with a good, strong top that gives him width and strong ribs. While he is strong on top, I want it to run down well, to give him good depth, straight sides, and fill evenly between the shoulder and ham; strong loin and full, wide ham, rounding out, dropping low and coupling up well on the back; not steep rump, but running out well to the root of the tail; he should have medium length and last, but not least, and upon a good, strong, rather short leg; bone of medium size and fine texture.

I should always avoid selecting a breeding boar showing or even indicating any uneven surface, and surely discard any animal in selection that did not possess four well-defined lines. In short, select one as near perfect as I possibly can.

In choosing this breeding boar I should see that he has the breeding of some good prolific strain, and with as fine a pedigree as was ever recorded.

Next, I should look to see if he belongs to a family that are uniformly good, strong, medium in make-up, and, last to see if he was one of a good, strong fine litter. The come-by-chance fine pig, whose mates are of an inferior class is a very unsafe and dangerous one to risk.

A great many go on the supposition that like begets like, but you will only discover, when too late, in the selection of this chance fine pig, that his gets are, in all probability, more like the litter from which he came than like himself.

In disposition, I should aim to select one with plenty of action and life, and a general all-round good feeder, but not on the cranky or restless order, from the fact that they are apt to reproduce these characteristics, which are very undesirable and hard to handle, and it is almost impossible to put them or even keep them in a salable condition.

On the other hand, I would avoid selecting one that is awkward and sluggish in his actions, as you are quite well aware, and they know they can't now. For upwards of fifty years they have always put out the very best wagon they knew how to make. And they have always been a step in advance of the best anybody else could make. That is how the Studebakers got their good name and the colossal business they are doing to-day. Studebaker's wagons stand first everywhere and always.

Studebakers also make a full line of all kinds of vehicles, harness, etc. They control entire output of the World Bugle Company and its "Lizard Line" of vehicles. All dealers handle Studebaker goods. Write us for catalogues, etc.

THE POLICY OF STUDEBAKERS

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THE COST OF A LITTER OF PIGS.

The cost of a litter of pigs until the day they first see the light cannot be accurately figured, nor is such a thing often attempted.

Nevertheless this is a matter which should not be wholly neglected by the successful swine raiser. The man who is intent on regarding the cost of a pig as beginning at its birth will be severely dented out of pocket, writes Robt. L. Dean, in "National Stockman."

It is not intended that a comparison of the cost of one litter be made with that of others, for obvious reasons. Yet there are items which will apply in every case.

To the litter should be charged the keeping of the sow from the time the previous litter is weaned. While the sow may grow and become more valuable, yet it is understood that this advantage will accrue to the coming litter. Not many sows when they have ceased to be useful as such will command a better price in the market than they would if they had been

finished for the packers the first year.

The individual care required for a sow such as separate quarters, a comfortable nest, sufficient water, increases the cost of keeping beyond the actual value of the food consumed. In this respect the spring litters are more expensive than the late summer litters, since in the latter cases the sows can more readily shift for themselves.

Another item is the cost and the keeping of the sire. Also there should be properly included some account of the owner's ability to manipulate his herd, especially if his skill is the result of experience and study, as it generally is.

While no one probably will succeed in getting these items down in dollars and cents it is to be hoped that a study of them will be helpful in approximating the cost, if for no other reason than to impress the facts that only the best sows are worth keeping and the loss even of a single litter should so far as possible be prevented.

CARE OF WELL-BRED SWINE.

Well-bred swine cannot be treated in the haphazard manner which is often given to the common pigs of the farm yard. I have seen farmers pay good prices for pure-bred swine and then abuse and neglect them so that the results of the experiment were poorer than from common pigs. In order to get proper results from well-bred animals of any kind they must be treated carefully and with the idea that they are very susceptible to their surroundings and environments. Chase and worry a pure-bred sow, as many of the common farm-yard animals are, and she will refuse to produce progeny that shows no advance upon the scrub. Indeed, I think sometimes they tend to degenerate faster than the common stock. This fact is often noticeable when fine-bred swine are shipped by railroad to distant points. They arrive in a nervous, frightened condition and they will scarcely eat enough to keep them alive. Animals in such condition need nursing. They require the kindest sort of attention. Treat them as if you wanted to make friends with them, and in a few days they will feel at home, writes E. P. Smith in the "American Cattleman."

There is profit in improving the herd with pure-bred stock, but the better these animals get the more careful we must be in feeding, tending and handling. They require better treatment all around. If one is not willing to give this to them it will not pay to make the investment. Stick to the scrubs they are better suited to such a person's conception of the business. There are farmers to-day who argue against pure-bred swine simply on that score. They do not care to raise hot-house animals, as they style them, and so they stick to their scrubs. Now, pure-bred swine are not hot-house animals; but then, neither are they scrubs. They do not demand coddling, but they do require good rational feeding, breeding and attending. These are essential to their best development. They are also necessary for the later profits which the farmer has a right to expect.

Starting the herd right with a good boar is the first step, but the good blood thus injected into the herd must be kept up and cultivated. It is necessary in every possible way to make the most of the qualities developed, which go toward improving the animals. We cannot emphasize these good qualities any too much in our treatment of these animals, and if we fail to be in sympathy with the work and the animals we cannot well succeed as we should.

THE SHEPHERD

DORSET SHEEP FOR CROSS BREEDING.

The common sheep of the country need grading up by the use of blood sires. I have done more or less experimenting along this line and have found that the cross of the Dorset-Shropshire has been exceedingly satisfactory, resulting in early development, fat, blocky lambs, ranging in color of face and legs from the Dorset to the smoky gray of the Shropshire. I have not tried crossing the Shropshire rams on Dorset ewes, but have always mated Dorset rams to Shropshire ewes. Perhaps the most satisfactory cross has been that of a Dorset ram on 75 per cent Rambouillet ewes of Spanish extraction. They were typical wrinkled Merinos with dense, greasy fleece. About 200 were bred to Dorset rams and the same number for comparative purposes were bred to Shropshire rams. About the same number of lambs resulted in each case (200), writes S. R. Quick, in the "Indiana Farmer."

It was very noticeable from the first that the lambs from the Dorset cross were stronger than from the Shropshire cross. This was more marked just after weaning time, which in my experience is the most trying period for lambs. The difference was very apparent early. The ewes were the same, but the lambs from the Dorset cross seemed much stronger and showed a determination to seek a livelihood at the earliest possible moment. There was less trouble in getting them started, the difference being due undoubtedly to the additional strength. When they were allowed to go into the feed lot, the advantage was very much in favor of the Dorset. I would like to say for breeders I think a great deal of the Dorset-Rambouillet grade.

I have done a great deal of grading with Cotswolds, Shropshires, Dorsets and Texels using the common native ewes. In every instance I have been better satisfied with the use of Dorset rams than any other. Grading or cross breeding, of course, can only be recommended where the offspring is intended ultimately for the butcher. However, there are many advantages to be gained from a careful observation of the scientific laws of breeding. I rather think ewe lambs from the first cross may be kept for the purpose of producing still higher grades. It should require but a few years to remove all indications of scrubs from the frames and ranges. This can be done by the judicious use of pure-bred rams produced and disseminated from the pure stocks already existing.

There seems to be some salient points which Dorset breeders should carefully observe.

First, strenuously avoid selling

scrubs even to the best of customers.

Second, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Third, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Fourth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Fifth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Sixth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Seventh, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Eighth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Ninth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Tenth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Eleventh, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Twelfth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Thirteenth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Fourteenth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Fifteenth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Sixteenth, do not sell to persons

who are not experienced in raising

pure-bred sheep.

Seventeenth, do not sell to persons

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Roof Proof

That M F Roofing Tin is the best roofing material is demonstrated by roof proof in every city and town of the whole land.

Here is a business block familiar to every resident of Pittsburg. It was covered with

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more than fifty years ago, and has had no repairs. The roof is as sound as ever to-day and good for many years yet. Do you want a roof that will not leak; that is weatherproof and almost wearproof?

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Carnegie Building, Pittsburg.

AMERICAN TIM PLATE COMPANY. New York.



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In those districts where heavy rains fell, field work was retarded to some extent, but in most sections the cultivation of corn has progressed rapidly and in some of the central and southern counties the early planted has been plowed the second time. Planting has not quite finished in the northern and some of the southeastern counties. The weather has been favorable for planting beans and sellers to trade on. The few which arrived were sold quickly at steady prices. It was a quiet opening also among the dealers, that is comparatively quiet.

A few Eastern buyers were on hand and a few the forenoon about two carloads of good big mules sold to no one.

Planting has been started in the southern drivers—Large, 15c@15c. Export chunks, 1,300 to 1,500 lbs.—Plains to good, 15c@15c; choice to extra, 15c@15c.

Country—Fair to good, 15c@15c; grease, 15c@15c.

HORSES—Light receipts from Tennessee quotable at \$2.50 per 6-gallon case.

PEACHES—Couple small lots from Texas; medium-sized only, poorly colored and sold at 5c per peck box and 15c per 4-basket crate.

BONES—Choice bleached at 35c per ton; other kinds from 5c to 15c.

RAGS, ETC.—Per 100 pounds: Country rags at 50c; old rope—No. 1 and manila, 15c; No. 3, 50c; rubber, 55c for old boots and shoes.

SCRAP IRON AND METAL—Per 100 pounds: wrought iron, 6c; heavy cast and malleable steel and breakage, 52c; stove, 12c; burnt, 2c; light brass, 16c; heavy brass, 20c; copper, 19c; zinc, 12c; lead, 15c; pewter, 12c.

SALT—East Side: Medium, 9c; granulated, 9c per barrel; worth 1c per barrel more this side.

SHEEP FELTS—Full-wool peals at 50c to 5c; shearing at 5c to 15c. Dry stock, fallen, etc., 5c per pound.

LIVE STOCK.

HORSES—The auction supply itself was a fairly liberal one, and when taken with the general receipts for the day made up quite a large supply for the season. The number of consignments which came from Iowa and Kansas and the relatively few from Missouri and Illinois was one of the notable developments. As indicated by the auction sale market does not start out with as good prospects. Medium and inferior classes have struck rather a lower tendency, and for the small southern horses there was hardly any demand existing. The market appears now to be rapidly approaching the period of summer quietness in the native branch of the business.

HORSES QUOTATIONS—Heavy draft—Common to good, 15c@15c; choice to extra, 15c@15c. Chunks, 1,150 to 1,350 lbs.—Fair to good, 15c@15c; good to choice, 15c@15c.

Choice horses and colts—Fair to good, 14c@15c; choice to extra, 13c@13c. Horses for the South—Small, light drivers, fair to good, 15c@15c; choice to extra, 15c@15c.

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Southern drivers—Large, 15c@15c. Export chunks, 1,300 to 1,500 lbs.—Plains to good, 15c@15c; choice to extra, 15c@15c.

Country—Fair to good, 15c@15c; mutton sheep at 15c@15c; stockers at 12c@12c, and bucks at 4c.

MISSOURI WEATHER AND CROPS.

The United States Department of Agriculture Climate and Crop Bulletin of the Weather Bureau, Missouri section, for the week ending May 19, is as follows:

The week just closed averaged decidedly warmer than usual throughout the state, but the precipitation has been local in character and very unevenly distributed.

Over portions of the north-west section and in localities in the northeast, central and southwest sections the total rainfall for the week exceeded two inches, but in many localities in those sections, and also over most of the southeastern counties, there was less than one-half an inch, some districts receiving only a trace. In a few localities in the western sections very heavy rains occurred, washing corn fields badly, while in many of the eastern and southern counties rain is now greatly needed, especially for oats, meadows and pastures.

HORSES QUOTATIONS—Heavy draft—Common to good, 15c@15c; choice to extra, 15c@15c. Chunks, 1,150 to 1,350 lbs.—Fair to good, 15c@15c; good to choice, 15c@15c.